Brief Description of the Drawing Figures

Fig. 1A is a block diagram illustrating a basic architecture of a VXML-enabled IVR development and deployment environment according to prior-art.

Fig. 1B is a block diagram illustrating the basic architecture of Fig. 1A enhanced to practice the present invention.

Fig. 2 is a process flow diagram illustrating steps for creating a voice application shell or container for a VXML voice application according to an embodiment of the present invention.

Fig. 3 is a block diagram illustrating a simple voice application container according to an embodiment of the present invention.

Fig. 4 is a block diagram illustrating a dialog object model according to an embodiment of the present invention.

Fig. 5 is a process flow diagram illustrating steps for voice dialog creation for a VXML-enabled voice application according to an embodiment of the present invention.

Fig. 6 is a block diagram illustrating a dialog transition flow after initial connection with a consumer according to an embodiment of the present invention.

Fig. 7 is a plan view of a developer's frame containing a developer's login screen of according to an embodiment of the present invention.

Fig. 8 is a plan view of a developer's frame containing a screen shot of a home page of the developer's platform interface of Fig. 7.

Fig. 9 is a plan view of a developer's frame containing a screen shot of an address book 911 accessible through interaction with the option Address in section 803 of the previous frame of Fig. 8.

Fig. 10 is a plan view of a developer's frame displaying a screen 1001 for creating a new voice application.

Fig. 11 is a plan view of a developer's frame illustrating screen of Fig. 10 showing further options as a result of scrolling down.

Fig. 12 is a screen shot of a dialog configuration window illustrating a dialog configuration page according to an embodiment of the invention.

Fig. 13 is a screen shot 1300 of dialog design panel of Fig. 12 illustrating progression of dialog state to a subsequent contact.

Fig. 14 is a screen shot of a thesaurus configuration window activated from the example of Fig. 13 according to a preferred embodiment.

Fig. 15 is a plan view of a developer's frame illustrating a screen for managing created modules according to an embodiment of the present invention.

Fig. 16 is a block diagram of the dialog transition flow of Fig. 6 enhanced for Web harvesting according to an embodiment of the present invention.

Fig. 17 is a block diagram of the voice application distribution environment of Fig. 1B illustrating added components for automated Web harvesting and data rendering according to an embodiment of the present invention.

Fig. 18 is a block diagram illustrating a Web-site logical hierarchy harvested and created as an object model.

Fig. 19 is a block diagram illustrating the model of Fig. 18 being manipulated to simplify the model for economic rendering.

Fig. 20 is a process flow diagram illustrating intermediary steps for reducing complexity of a Web-site logical tree.

Fig. 21 is a block diagram illustrating a secure connectivity between a Voice Portal and a Web server according to an embodiment of the invention.

Fig. 22 is a block diagram illustrating the architecture of Fig. 1B enhanced with a vocabulary management server and software according to an embodiment of the present invention.

Fig. 23 is a block diagram illustrating various functional components of a VMXL application architecture including cache optimization components according to an embodiment of the present invention.

Fig. 24 is a process flow diagram illustrating steps for practice of the present invention.

Fig. 25 is a block diagram of the VXML architecture of Fig. 23 enhanced with a text-to-speech- preprocessor according to an embodiment of the present invention.

Fig. 26 is a block diagram illustration possible variances of speech renderings of a text string.

Fig. 27 is a block diagram illustrating an organized mapping table according to an embodiment of the present invention.

Description of the Preferred Embodiments

According to preferred embodiments of the present invention, the inventor teaches herein, in an enabling fashion, a novel system for developing and deploying real-time dynamic or static voice applications in an object-oriented way that enables inbound or outbound delivery of IVR and other interactive voice solutions in supported communications environments.

Fig. 1A is a block diagram illustrating a basic architecture of a VXML-enabled IVR development and deployment environment according to prior art. As described with reference to the background section, the prior-art architecture of this example is known to and available to the inventor. Developing and deploying voice applications for the illustrated environment,